ABSTRACT

The invention relates to a method of refrigerant level monitoring in a refrigerant circuit of an air-conditioning or heat-pump system having a compressor and a refrigerant which may, depending on the operating point, be operated in the supercritical range. The method includes standstill level monitoring with the compressor switched off and/or in-operation level monitoring with the compressor switched on. In the case of in-operation level monitoring, the refrigerant overheat (dTü) at the evaporator is registered and, in the event of excessive overheat, it is concluded that there is underfilling. At a standstill, the pressure and temperature of the refrigerant are registered, and it is concluded that there is an improper refrigerant filling level if the pressure (p_{KM}) lies below a minimum pressure value (p_{min}) or the temperature (T_{KM}) lies above a maximum saturation temperature value (T_S) with the pressure being outside a predefinable intended pressure range ($[p_u,p_o]$).